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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/479,783	01/07/2000	STANLEY T CROOKE	ISIS-4313	3541
34138	7590	06/08/2006	EXAMINER	
COZEN O'CONNOR, P.C. 1900 MARKET STREET PHILADELPHIA, PA 19103-3508			MCGARRY, SEAN	
			ART UNIT	PAPER NUMBER

1635
DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/479,783

Applicant(s)

CROOKE, STANLEY T

Examiner

Sean R. McGarry

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 78-81, 93-95, 97, 106, 117-140, 147-152 and 176-193 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 81, 93, 106 and 176-193 is/are allowed.
- 6) ☒ Claim(s) 78-80, 94, 95, 97, 117-140, 147-152 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Official Action is in response to applicants' response filed 2/16/06 and the interview of 2/27/06.

Claims 78-81, 93-95, 97, 106, 117-140, 147-152, and 176-193 are pending and under examination.

Claims 78, 80, 81, 93-96, 98, 100-102, 117-144, 146, 153-156, 158, 165-168, 170-175, 180, 181 **were** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection has been withdrawn in view of the amendments to the claims in the response filed 2/16/06.

Claims 78-81, 93-98, 100-102, 106, 117-144, 146-156, 158, 165-168, and 170-181 **were** rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection has been withdrawn in view of applicants arguments and the amendments to the claims in the response filed 2/16/06.

Claims 96, 98, 100, 142, 144, 146, 154, 156, 158, 166, and 168, and 170 **were** rejected under 35 U.S.C. 102(b) as being anticipated by Ohtsuka et al [US 5,013,830, cited by applicant].

This rejection has been withdrawn in view of the amendments to the claims in the response filed 2/16/06.

Claims 78, 79, 94, 95, 99, 101, 102, 127, and 128 **were** rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Froehler et al [US 5,256,775, cited by applicant].

This rejection has been withdrawn in view of the amendments to the claims in the response filed 2/16/06.

Claims 78, 80, 81, 93-96, 98, 100-102, 117-122, 129-144, 146, 153-156, 158, 165-168, and 170-175 **were** rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection has been withdrawn as applicant has pointed to support in Example 27, for example (see interview summary of 2/27/06).

Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the withdrawal of all rejections of record and the new ground(s) of rejection below.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 78, 79, 80, 94, 95, 97, 117-119, 121-125, 127-131, 133-137, 139, 140, 147-149, 151, and 152 are rejected under 35 U.S.C. 102(e) as being anticipated by Usman et al [US 6,849,726 B2].

Usman et al disclose double stranded RNA compounds(two non covalently linked oligos) that are 8 to fifty subunits in length, have at least four consecutive ribofuranosyl residues having phosphodiester linkages, wherein at least one of the the oligos is modified including 2'methoxy and 2'-fluoro modifications and phosphorothioate linkages. The compounds are composed of a synthetic RNA ribozyme that contains the modifications and a synthetic RNA substrate. See Figures (1, 7, 10, 11, 12, 16, 17), Examples 6 and 7, columns 19-26 (description of substrates), and claims 1-12.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 120, 126, 132, 138, and 150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usman et al [US 6,849,726 B2].

The invention is drawn to double stranded RNA compounds (two non covalently linked oligos) that are 8 to fifty subunits in length, have at least four consecutive ribofuranosyl residues having phosphodiester linkages, wherein at least one of the the oligos is modified including 2'-methoxy, and 2'-fluoro modifications, and 2'-O-methoxy-ethoxy modifications and phosphorothioate linkages.

Usman et al disclose double stranded RNA compounds (two non covalently linked oligos) that are 8 to fifty subunits in length, have at least four consecutive ribofuranosyl residues having phosphodiester linkages, wherein at least one of the the oligos is modified including 2'methoxy and 2'-fluoro modifications and phosphorothioate linkages. The compounds are composed of a synthetic RNA ribozyme that contains the modifications and a synthetic RNA substrate. See Figures (1, 7, 10, 11, 12, 16, 17), Examples 6 and 7, columns 19-26 (description of substrates), and claims 1-12. Usman et al do not specifically disclose 2'-O-methoxy-ethoxy modifications.

However, Usman et al have taught that such modifications are routine matters of choice in the art. At column 4, for example, it is taught that methoxy and ethoxy are "well known in the art" as optional substituents for optionally substituted glycol linkers. It

Art Unit: 1635

is noted that applicant specification asserts that use of methoxyethoxy substituents as taught in the prior art (see paragraph 20 of the instant specification, for example.

The invention as a whole would therefore have been *prima facie* obvious to one in the art at the time the invention was made.

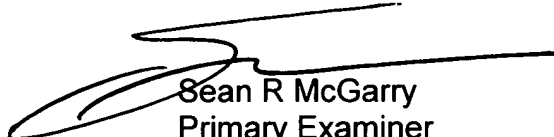
Claims 81, 93, 106, and 176-193 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean R. McGarry whose telephone number is (571) 272-0761. The examiner can normally be reached on M-Th (6:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras can be reached on (571) 272-4517. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sean R McGarry
Primary Examiner
Art Unit 1635